SIEMENS

ARCADIS

SP

Installation and Startup

Option

DAP / Air Kerma

ARCADIS Varic
ARCADIS Orbic
ARCADIS Avantic

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General information

Safety information

General electrical safety information

⚠WARNING

Electrical safety!

Non-compliance can lead to severe injury or even death, as well as material damage.

- **Parts under electrical voltage are accessible when the covers are open. To avoid danger, disconnect the system from the power supply before opening the covers. Disconnect the power plug.**
- **If an uninterruptible power supply (UPS) is installed in the system, the voltage output of the UPS must also be deenergized or the voltage output plug must be disconnected.**
- **If work steps must be performed using electrical power, the general safety information according to TD00-000.860.01 must be observed.**

Radiation safety information

⚠WARNING

X-ray radiation!

Non-compliance can lead to illness, irreversible damage to body cells and the genotype, severe injury and even death.

During work on the system in which radiation must be released, the radiation protection directives and the rules for radiation protection according to ARTD-002.731.02.. must be complied with.

Please note:

- **Use available radiation protection devices.**
- **Wear radiation protection clothing (lead apron).**
- **Stay as far away as possible from the radiation source.**
- **Release radiation only if necessary.**
- **Set the radiation activity as low as possible. (low kV and mA values, short radiation time)**
- **Release radiation for as short a time as possible.**

- **Checks requiring the release of radiation are identified by the radiation warning symbol shown on the left.**

Laser light localizer option containing class 2 Lasers

⚠CAUTION	**Laser emissions!** **This product contains class 2 lasers. (USA: Laser class 2)** **Disregarding safety precautions can lead to bodily injury, especially to the retina of the eye, resulting in irreversible damage to vision.** ➪ **Observe the safety information in ARTD-002.731.03... When working with the laser light localizer, do not look directly into the laser beam.**

NOTE	**Laser emissions!** **There is no direct hazard to the eye (blinking reflex). Nevertheless do not look directly into the laser beam.**

Required parts

- Dose area product measuring device

Required tools and measuring equipment

- Tool kit (see SPC catalog)
- Dose meter
- Crosshairs

System software requirement

- These instructions apply to ARCADIS System Software version VB13C and later.

Installing the measurement chamber, ARCADIS Avantic

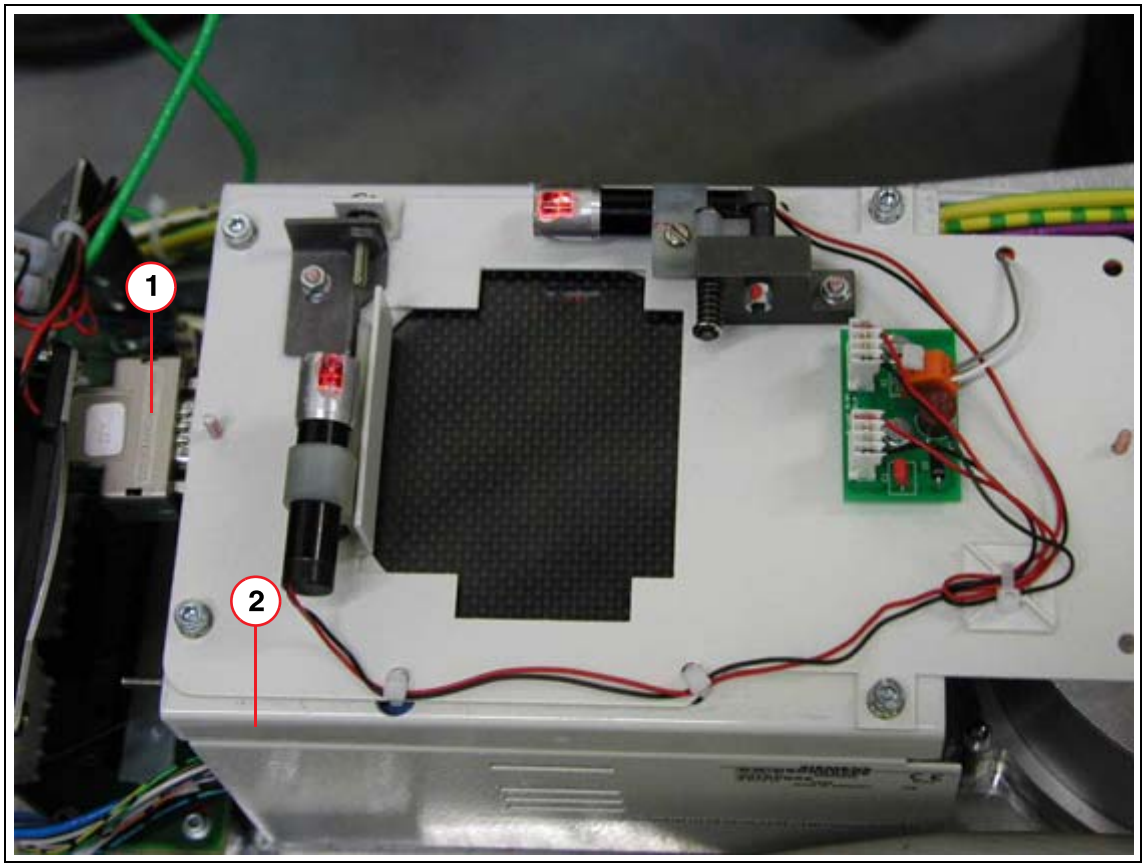

Fig. 1: Measuring chamber connector

Laser light localizer (optional)

- Remove the laser light localizer (if one is present) before installing the measurement chamber. After installation is complete, reinstall the localizer, check it, and adjust it as needed according to the laser light localizer adjustment instructions.

Installing the measuring chamber (Wellhöfer)

1. Disconnect the ARCADIS power plug.
2. Unscrew the POWERPHOS cover. Carefully separate the adhesive joints on the long sides of the cover.
3. Remove the measuring chamber connector (1/Fig. 1 / p. 6) from the cable tie.
4. Place the dose measuring chamber on the POWERPHOS according to (2/Fig. 1 / p. 6).
5. Use the threaded bolts and screws (included) to secure the dose measuring chamber to the POWERPHOS.
6. Connect the measuring chamber connector (1/Fig. 1 / p. 6) to the measuring chamber.
7. With the switch on the measuring chamber, select a resolution of 0.01.

8. Reattach the POWERPHOS cover.

Installing the measurement chamber, ARCADIS Varic / Orbic

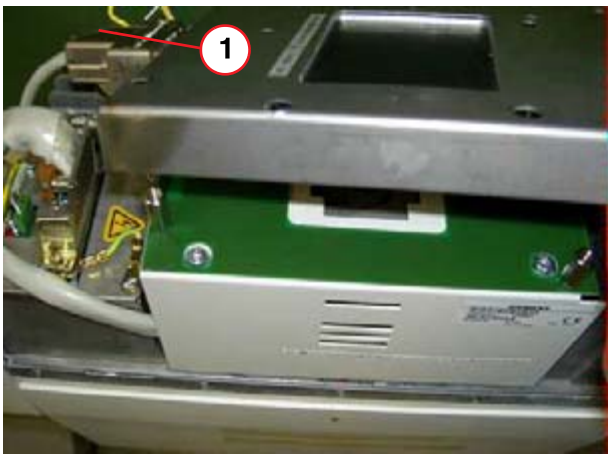

*Fig. 2: Measuring chamber connector_*

Laser light localizer (optional)

- Remove the laser light localizer (if one is present) before installing the measurement chamber. After installation is complete, reinstall the localizer, check it, and adjust it as needed according to the laser light localizer adjustment instructions.

Installing the measuring chamber

1. Disconnect the ARCADIS power plug.
2. Unscrew the SIREPHOS cover. Carefully separate the adhesive joints on the long sides of the cover.
3. Remove the measuring chamber connector (1/Fig. 2 / p. 8) from the cable tie.
4. Place the dose measuring chamber on the SIREPHOS according to (1/Fig. 2 / p. 8). The text "Focus" must point toward the X-ray tube.
5. Use the threaded bolts and screws (included) to secure the dose measuring chamber to the SIREPHOS.
6. Connect the measuring chamber connector (1/Fig. 2 / p. 8) to the measuring chamber.
7. With the Wellhöfer measuring chamber, use the switch on the measuring chamber to select a resolution of 0.01.

NOTE	**With the old PTW chamber, the resolution is not selectable and is permanently set to 1.**

8. Reattach the SIREPHOS cover and secure the adhesive joints.

Main system configuration, Varic / Orbic / Avantic

Main system configuration

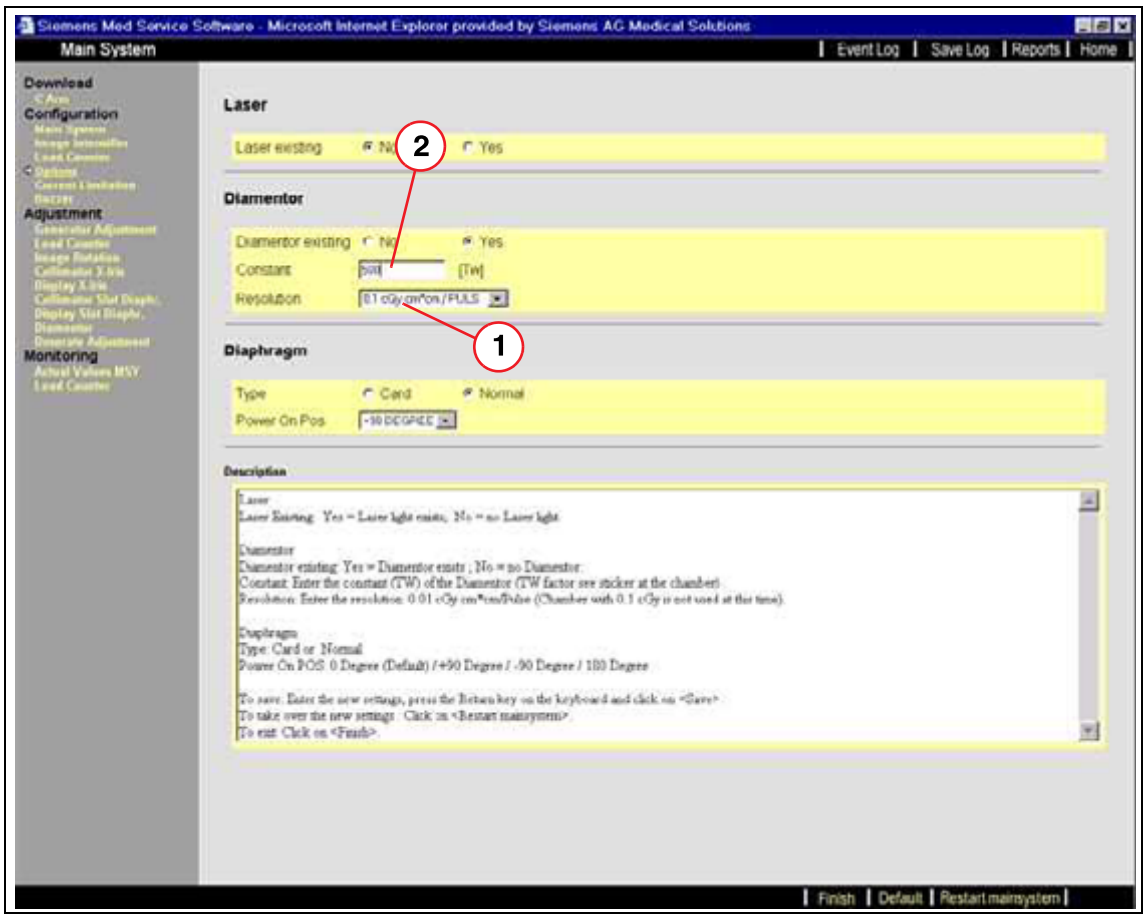

*Fig. 3: main_system_*

NOTE **With the PTW measuring chamber, the air kerma display is not possible.**

Configuration with PTW measuring chamber

1. Start and log on to the service program.
2. <Click <**Main System**> and <**Next**>.
3. Under "Configuration", click <**Options**>.
4. Under "Diamentor Existing", click <**Yes**>.
5. Read off the "**TW**" factor from the identification tag on the diamentor chamber and enter it in the "Constant" field (2/Fig. 3 / p. 9).
6. In the "Resolution" field (1/Fig. 3 / p. 9), select "1.0cGy cm*cm/Puls"

7. <Click <**Save**>.

Configuration with Wellhöfer measuring chamber

1. Start and log on to the service program.
2. <Click <**Main System**> and <**Next**>.
3. Under "Configuration" click <**Options**>.
4. Under "Diamentor Existing", click <**Yes**>.
5. Click **<Save>**.
6. Under "Adjustment", click <**DAP / Air Kerma**> and "**>**" for the next page in the Service menu.
7. In the service view, click the link "**Click Here**", perform a "Chamber Test" on the system according to the instructions, and make note of the resulting **"TW"** factor.
8. Under "Configuration", click **<Options>** and enter the noted "**TW**" factor in the "Constant" field (2/Fig. 3 / p. 9).
9. In the "Resolution" field (1/Fig. 3 / p. 9), select "0.01cGy cm*cm/Puls"
10. Click <**Save**>.

Configuring and checking the DAP display

Prerequisite for "Checking the dose area product (DAP)"

- In the service menu, under <Configuration>-<Imaging System>-<Display Settings>, the default value "**Dose Area Product**" must be selected.

Checking the dose area product (DAP)

NOTE

This calibration operation is used to adjust the area dose product measuring device to the ARCADIS system monitor display.

1. Start and log on to the service program.
2. <Click <**Main System**> and <**Next**>.
3. Under "Adjustment", click <**DAP / Air Kerma**> and "**>**" for the next page in the Service menu.
4. In the service view, click the link "**click here**" and perform a "**DAP accuracy check**" on the system according to the instructions.

   ➪ If air kerma display on the monitor is desired, continue with "Configuring and checking the air kerma display".

Configuring and checking the Air Kerma display

NOTE

On the ARCADIS system, it is possible to display, instead of the dose area product, the air kerma value derived from it. Please check with the customer to find out which display is desired.

Prerequisites for the air kerma display

- A Wellhöfer measuring chamber must be installed, and the resolution must be set to 0.01.
- The step "Checking the dose area product (DAP)" needs to have been completed beforehand.

Configuring the air kerma display on the imaging system

1. Start and log on to the service program.
2. Under “Configuration” - “Imaging System”, click <**Display Settings**>.
3. <Select **Air Kerma**> and click <**Save**>.
4. In the service window, click <**Home**>.

Checking the air kerma display

1. <Click <**Main System**> and <**Next**>.
2. Under "Adjustment", click <**DAP / Air Kerma**> and "**>**" and "**>**" for the third page in the Service menu.
3. In the service view, click the link "**click here**" and perform an "**Air Kerma accuracy check**" on the system according to the instructions.
   ➪ If the tolerance of the display does not fall within ± 35, then perform the “**Air Kerma dose matching**” procedure on the system according to the instructions.

Final work steps

- In the "Home" menu, click <**Backup & Restore**>; under "Command" select "Backup"; under "Drives" select "(-R-) CD-R"
- Use <**Go**> to start the burning operation for the following packages: SW Settings, Aspia Settings, Security Settings, ExamSet, MainSystem.
- Perform partial acceptance tests in accordance with country-specific regulations.
- Check the calibration of the laser light localizer if applicable.

14 Changes to previous version

n.a.; initial publication.